

### **Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently amended)** A device for determining the coagulation state of a sample comprising:

a sample chamber defining a volume for receiving a sample to be analysed, the sample chamber having a sample chamber major axis;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field;

a ~~means~~ first electromagnet and a second electromagnet for applying a magnetic field to at least part of the chamber volume, the first electromagnet being spaced apart from the second electromagnet by the sample chamber, the first electromagnet having a first electromagnet major axis, the second electromagnet having a second electromagnet major axis, and the first electromagnet major axis and the second electromagnet major axis being parallel to the sample chamber major axis; and

at least one ~~magnetic field~~ sensor operative to ~~continuously~~ detect ~~the time dependent movement~~ a response, along the sample chamber major axis, of the at least one particle to the magnetic field throughout its movement within the chamber; and

a processor configured to determine the coagulation state of the sample based on the ~~continuously detected time dependent movement~~ response, along the sample chamber major axis, of the at least one particle to the magnetic field throughout its movement within the chamber.

2. **(Previously Presented)** The device of claim 1, wherein the device further comprises a display.
3. **(Previously Presented)** The device of claim 1, wherein the device displays a value that is correlated with a disturbance of hemostasis.

4. **(Previously Presented)** The device of claim 1, wherein the device displays a clotting time and/or an INR value.
5. **(Previously Presented)** The device of claim 1, wherein the sample is blood or plasma.
6. **(Previously Presented)** The device of claim 1, further comprising a filling chamber.
7. **(Previously Presented)** The device of claim 6, further comprising a filling device for filling the chamber.
8. **(Previously Presented)** The device of claim 7, where the filling device comprises a capillary.
9. **(Previously Presented)** The device of claim 1, wherein the material which experiences a force when placed in a magnetic field is ferromagnetic, paramagnetic, or superparamagnetic.
10. **(Previously Presented)** The device of claim 1, where the at least one particle is generally spherical.
11. **(Previously Presented)** The device of claim 1, where the at least one particle has a size in the range of about 2 to about 500 $\mu$ m.
12. **(Previously Presented)** The device of claim 11, wherein the at least one particle has a size in the range of about 2 to about 20 $\mu$ m in at least one direction.
13. **(Previously Presented)** The device of claim 1, wherein the at least one particle comprises two or more different materials and wherein at least one material experiences a force when exposed to a magnetic field.
14. **(Previously Presented)** The device of claim 1, wherein more than one particle is disposed in the chamber volume.
15. **(Currently Amended)** The device of claim 1, wherein the magnetic ~~fields~~ field is between about 1 and about 100 mT.
16. **(Previously Presented)** The device of claim 15, wherein the magnetic field is between about 10 and about 50 mT.

17. **(Previously Presented)** The device of claim 16, wherein the magnetic field is between about 10 to about 20 mT.
18. **(Previously Presented)** The device of claim 1, wherein the device further comprises at least one reagent disposed within the chamber prior to introduction of a sample into the device.
19. **(Previously Presented)** The device of claim 18, wherein the reagent is selected from the group consisting of: clotting agents, anti-clotting agents, and reagents suitable for measurement of a disturbance of hemostasis.
20. **(Canceled)**
21. **(Currently Amended)** The device of claim 1 ~~20~~, wherein each electromagnet produces a constant field and is activated alternatively with a direct current.
22. **(Currently Amended)** The device of claim 1, wherein the ~~magnetic field~~ sensor is a Hall Effect sensor.
23. **(Previously Presented)** The device of claim 1, wherein the device further comprises circuitry for measuring the time elapsed from introduction of a sample until a change in coagulation state is detected.
24. **(Previously Presented)** The device of claim 1, wherein the device further comprises a control means.
25. **(Canceled)**
26. **(Currently Amended)** The device of claim 1 ~~25~~, wherein the chamber has a volume of less than about 25 $\mu$ l.
27. **(Previously Presented)** The device of claim 26, wherein the chamber has a volume less than about 5 $\mu$ l.
28. **(Currently Amended)** The device of claim 1 ~~25~~, wherein the device further comprises a means for heating the chamber.
29. **(Currently Amended)** The device of claim 1 ~~25~~, wherein the chamber is formed in a disposable support strip which is removable from the device.

30. (Currently Amended) A method of determining the coagulation state of a sample comprising:

providing a sample in a sample chamber, the sample chamber having a major axis, and the sample containing at least one particle comprising a material which experiences a force when placed in a magnetic field;

applying a magnetic field to said sample using a first electromagnet and a second electromagnet, the first electromagnet being spaced apart from the second electromagnet by the sample chamber, the first electromagnet having a first electromagnet major axis, the second electromagnet having a second electromagnet major axis, and the first electromagnet major axis and the second electromagnet major axis being parallel to the sample chamber major axis; and

using a ~~magnetic field~~ sensor to ~~continuously~~ detect ~~the time dependent movement a~~ response, along the sample chamber major axis, of the at least one particle to the magnetic field along its movement to determine the coagulation state of the sample.

31. (Canceled)

32. (Currently Amended) A ~~The~~ device of claim 1, for determining the coagulation state of a sample comprising:

~~a chamber defining a volume for receiving a sample to be analysed;~~

~~at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;~~

~~a means for applying a magnetic field to at least part of the chamber volume; and~~

~~at least one magnetic field sensor operative to continuously detect the movement of the at least one particle as it moves within the chamber;~~

~~and a processor configured to determine the coagulation state of the sample based on the continuously detected time dependent movement of the at least one particle.~~

33-40. (Canceled)